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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/635,479

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Robert G. Gann

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06/23/2004

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EXAMINER

WORKU, NEGUSSIE

ART UNIT

PAPER NUMBER

2626

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/635,497 **479**

Applicant(s)

HSU ET AL.

Examiner

Negussie Worku

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 April 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5,7-15,17-19 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7-15,17-19 and 21-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 7-11, 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iyoda et al. (USP 5,515,181) in view of Thompson et al. (USP 6,577,339).

With respect to claim 1, Iyoda discloses a method of digital imaging utilizing a look-down digital imaging, (as shown in fig 10 and 11, camera 1 positioned from the top-down toward the image 103b of fig 11), said method comprising: illuminating a target scan area (area of original specifically 103b of fig 11, targeted by light source 104 of fig 11), see (col.6, lines 10-10-13) below said look-down digital imaging device, (a look-down device 1 of fig 11), see (col.4, lines 1 -10); capturing video data of said target scan area, (as shown in fig 11, camera 1 has been focused or image has been targeted to the image area 103b of fig 1, which is need to be scanned).

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lyoda et al. does not disclose displaying said captured video data on a display; and sweeping an image raster line once across said target scan area, there by capturing said resulting high-resolution digital image of said original object.

However, Thompson et al. discloses displaying said captured video data on a display (data captured by imaging system 100 of fig 1, displayed on display 1050 of fig 1); and sweeping an image raster line once across said target scan area, 9a camera can be arranged to sweep a specified or targeted area, see col.14, lines 15-20) there by capturing said resulting high-resolution digital image of said original object, (a high-resolution image data to be taken by the camera, see col.11, lines 58-60).

Since lyoda et al., and Thompson et al., are directed toward at least an image reading and pickup apparatus, the purpose of using a display device said captured video data on a display; and sweeping an image raster line once across said target scan area, there by capturing said resulting high-resolution digital image of said original object, would have been recognized by lyoda et al. as specifically set forth by Thompson et al.

It would have been obvious to rearrange or configure image-reading device 1 of fig 11, of lyoda et al., with imaging device 1000 of fig 1, of Thompson et al., for the purpose of reducing the size and the weight of the imaging device and using a high-resolution scanner in order to perform high resolution image as disclosed by Thomson et al. see (col.1, lines 56-65).

With respect to claim 2, lyoda discloses the method (as shown in 10 and 11) wherein said captured digital image of said original (103a of fig 11) is a single, congruent digital image (image data captured by image scanner 1 of fig 11) of said original.

lyoda does not disclose capturing a high-resolution digital image.

However, Thompson et al., discloses producing a high-resolution image during a full scan mode or at the time sweep a specified area, see (col.11, lines 58-62).

Since lyoda et al., and Thomson et al., are directed toward at least image reading or pickup apparatus, the purpose of using high resolution image for digital image data, would have been recognized by lyoda as specifically set forth by Thompson et al.

It would have been obvious to replace image-reading device 1 of fig 11, of lyoda et al., with image line sensor 1000 of fig 1 of Thomson et al., for the purpose of using a high-resolution scanner in order to perform high resolution image as disclosed by Thompson et al. see (col.11, lines 58-60).

It would have been obvious to replace image-reading device 1 of fig 11, of lyoda et al., with image line sensor 1000 of fig 1 of Thompson et al., for the purpose of using a high-resolution scanner to get a better resolution of user's preference.

With respect to claim 7, lyoda discloses the method (as shown in fig 11), further comprising: selecting (camera 1, select part of the image) at least a

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portion of said original image (103 a of fig 11) to be captured as a digital image, see (col.6, lines 3-6).

lyoda does not disclose capturing a high-resolution digital image.

However, Thompson et al., discloses producing a high-resolution image during a full scan mode or at the time of sweeping a specified area, see (col.11, lines 58-62).

Since lyoda et al., and Thomson et al., are directed toward at least an image reading and pickup apparatus, the purpose of using high resolution image for digital image data, would have been recognized by lyoda as specifically set forth by Thompson et al.

It would have been obvious to replace image-reading device 1 of fig 11, of lyoda et al., with image line sensor 1000 of fig 1 of Thompson et al., for the purpose of using a high-resolution scanner to get a better resolution of user's preference.

With respect to claim 8, lyoda discloses the method (as shown in fig 11) wherein said look-down digital imaging device (1 of fig 11) recognizes said at least a portion of said original image (103 of fig 11) to be captured as that portion see (col.6, lines 3-6) over which an indicator is moved, see col.4., lines 36-40).

With respect to claim 9, lyoda discloses the method (as shown in fig 10 and 11) wherein said sweeping is achieved by at least one movement selected from the group consisting pivoting said look-down digital imaging device (1 of fig

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11) about an axis, (imaging device moves in X, Y direction), pivoting said look down digital imaging device (1 of fig 11) about an axis and translating look-down digital imaging device (11 of fig 11) vertically relative to said target scan area during said pivoting, and translating said look-down digital imaging device laterally relative to said target scan area, see (col.4, lines 35-41).

With respect to claim 10, lyoda disclose a look-down digital imaging device (1 of fig 11) comprising: linear sensor (CCD 15 of fig 11) for imaging a raster line of an original image (103 of fig 11) placed substantially below said look-down digital imaging device (1 of fig 11); and lens for focusing reflected light from said object to said linear sensor, (15 of fig 11, see col.4, lines 25-27), Wherein said linear sensor (since the imaging device of fig 11 is a mirror-less device, sensor 1 of fig 11, receives a straight line (non folded optical light from the object) receives a non-folded optical path of light reflected from said object, (see fig 1 of 11).

With respect to claim 11, lyoda disclose the look-down digital imaging device (1 of fig 11), wherein said linear sensor (CCD 15 of fig 10), comprises a tri-liner color CCD array, see col.4, lines 24-26.

With respect to claim 14, the look-down digital imaging device (1 of fig 11), further comprising a digital video camera (1 of fig 11), for capturing video data of said original (103 of fig 11).

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With respect to claim 15, the look-down digital imaging device (1 of fig 11), implemented as a standalone device, see (fig 1 of fig 11).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17-18, 21-23, rejected under 35 U.S.C. 103(a) as being unpatentable over lyoda et al. (USP 5,515,181) in view of Oles et al. (USP 6,047,130).

With respect to claim 17, lyoda et al. discloses the system for performing digital imaging device (1 of fig 11), comprising: a look-down digital imaging device (1 of fig 11) that includes means (CCD 15 of fig 10) for imaging a raster line over a target scan area and means (focal control mechanism 19 of fig), for focusing reflected light from said target scan area to said imaging means (15 of fig 11).



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lyoda et al. does not disclose a means for capturing video data of said target scan area for providing a video preview of the target scan area before said imaging means captures an image of said target scan area.

Oles disclose a means for capturing video data (a video charged coupled device (CCD camera 50 of fig 1, see col.3, lines 63-65) of said target scan area for providing a video preview (video preview monitor 48 of fig 1) of the target scan area before said imaging means (50 of fig 1) captures an image of said target scan area (object 60 of fig 1).

Since lyoda et al., and Oles are directed toward at least an image reading and pickup apparatus, the purpose of using a means for capturing video data of said target scan area for providing a video preview of the target scan area before said imaging means captures an image of said target scan area, would have been recognized by lyoda et al. as specifically set forth by Oles.

It would have been obvious to configure image-reading device 1 of fig 11, of lyoda et al., with imaging device of fig 1, of Oles, for the purpose of the user view the video image before printed or outputted or stored in a memory disclosed by Oles, see (col.1, lines 63-65).

With respect to claim 18, lyoda et al., discloses the system of (imaging device 1 of fig 11), wherein said means (line sensor 15 of fig 11, is an imaging means for scanning a high resolution) for imaging is a high resolution (magnification control 17, may determine a resolution by which the whole original image is performed, so that resolution can be setup approximately not less than

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user preference, which may be 300 dpi resolution, by a resolution set up means 17 of fig 10, see col.2, lines 22-23, and see also col.4, lines 56-60.

With respect to claim 21, lyoda et al. discloses wherein said means (camera 1 of fig 11) for imaging a raster line over said target scan area (scan area 103b of fig 11) sweeps said raster line once over said target scan area for capturing a final image of an original object at a desired resolution, see (col. 15, lines 30-34).

With respect to claim 22, lyoda et al. discloses a system comprising a look-down digital image (1 of fig 11), the includes a linear sensor, (15 of fig 1) where said look-down digital imaging device (1 of fig 11) is operable to sweep a raster line across a target area of an original object placed substantially below said look-down digital device (1 of fig11) to capture an image of said target area said linear sensor (15 of fig 1); a digital video camera (camera 1 of fig 11) for capturing video data said target area 103b of fig 11).

lyoda et al. does not disclose a display for displaying the captured video data.

Oles disclose a display device for displaying of said target scan area for providing a video preview (video preview monitor 48 of fig 1 for displaying captured data).

Since lyoda et al., and Oles are directed toward at least an image reading and pickup apparatus, the purpose of using a display for displaying capturing

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video data of said target scan area for providing a video preview of the target scan area before said imaging means captures an image of said target scan area, would have been recognized by lyoda et al. as specifically set forth by Oles.

It would have been obvious to configure image-reading device 1 of fig 11, of lyoda et al., with imaging device of fig 1, of Oles, for the purpose of the user view the video image on a display device before printed or outputted or stored in a memory.

With respect to claim 23, lyoda et al. discloses the system (as shown in fig 1) wherein the digital video camera (1 of fig 11) captures the video data of said target area (area 103b of fig 11) and said display displays the captured video data to provide a preview, see (col. of the target area to be image by the look-down digital imaging device (11 of fig 11) before said look-down digital imaging device (1 of fig 11) capturing said image target said area.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**6. Claims 3, 5, 12-13, 19, and 24 rejected under 35 U.S.C. 103(a) as being unpatentable over lyoda et al. (USP 5,515,181), in view of Oles (USP 6,047,130) further in view of Sears et al., (USP 6115482).**

With respect to claim 3, 5, 12-13, 19 and 24-25, lyoda dose not disclose the captured digital image data of said original at resolution no less than approximately 300 dpi.

Sears et al. disclose the optical character recognition operations (OCR 51 of fig 2) on captured digital image data of said original at resolution no less than approximately 300 dpi, see (col.7, lines 25-35).

Since lyoda et al., and Sears et al., are directed toward at least having image reading or pickup apparatus, the purpose of using the optical character recognition operations on captured digital image data of said original at resolution no less than approximately 300 dpi, would have been recognized by lyoda as specifically set forth by Sears et al.

It would have been obvious to replace image reading device 1 of fig 11, of lyoda et al., with optical [OCR] device 51 of fig 2, for the purpose of using scanning documents of printed material at any time any places in today's daily lives, in a high or better resolution of user's preference, as clearly set forth by Sears et al.


### Response to Arguments

7. Applicant's response filed April 14 2004, have been considered and reviewed. With respect to claim 1-3, 5-15, 17-19, 21-25, Examiner respectfully submits that applicant's amendment necessitated the new ground(s) of rejection.

Therefore, The prior arts alone or in combination read on each elements of claims as discussed above and this office action is non-final.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Negussie Worku whose telephone number is 305-5441. The examiner can normally be reached on 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Kimberly Williams** can be reached on 703-305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
6/14/06

  
MARK WALLERSON  
PRIMARY EXAMINER